

Environment Quarterly

EzemVelo Ngenyanga Ntathu • Mbango wa kotara • Mupo nga Kotara



**R1 million set aside
for youth projects**

EXCLUSIVE:

Interview with outgoing DG



**environment, forestry
& fisheries**

Department:
Environment, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



**STAY
SAFE**

PROTECT SOUTH AFRICA

TOGETHER WE CAN BEAT THE CORONAVIRUS

2020 environment CALENDAR



JANUARY

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02 February
02 March
21 March
23 March
22 April

World Wetlands Day
World Wildlife Day
International Day of Forests
World Meteorological Day
Earth Day

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17 May
22 May
05 June
08 June

World Migratory Bird Day
International Day for Biological Diversity
World Environment Day
World Oceans Day

17 June
18 July
31 July
31 Aug - 04 Sep

Desertification and Drought Day
Nelson Mandela Day
World Ranger Day
Arbour Week

SEPTEMBER

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16 September
19 September
07 - 11 September
21 November

International Day for the Preservation of the Ozone Layer
International Coastal Clean-up Day
South African National Parks Week
World Fisheries Day

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You may have
left for green
pastures, but in
doing so, you
have left our
worlds greener.



To use this QR code conveniently you must have a smartphone equipped with a camera and a QR code reader/scanner application feature.





Dear Valued Stakeholder

Our editorial team has been busy the past three months putting together this Youth and Environment month edition. I hope you will find the edition refreshing and exciting enough to keep you coming back for more on the latest news from our department.

June is celebrated as Environment Month, with South Africa joining its global partners to celebrate the sterling work done to protect our environment for current and future generations.

This year's World Environment Day took place under the theme "It's Time for Nature". The theme affirmed that human beings are part of the ecosystem and therefore intricately linked to nature. The COVID-19 pandemic has placed nature in sharp focus as we recognise the need to take better care of the environment so that it can in turn take care of us.

When you take care of the environment, the environment will take care of you, I would quip.

The theme was a call on all of us to combat the accelerating species loss and degradation of the natural world.

South Africa is a member of the three Rio Conventions, the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Convention to Combat Desertification (UNCCD).

We believe that efforts to address the impact of climate change, efforts to address biodiversity loss and those geared towards reversing land degradation are mutually inclusive, and mutually beneficial. It is with in mind that we celebrated Environment Month, while also acknowledging the role our youth can play in the green economy.

June is also Youth Month in South Africa and this year's celebrations coincided with the 44th anniversary of the 16 June 1976 student uprising that saw young people protest against the imposition of Afrikaans by the apartheid regime as a medium of instruction.

The uprising ended tragically with hundreds of young people brutally killed. The class of 1976 became history-makers as their actions resulted in a profound change in the socio-political landscape of our nation.

Youth Month this year took place amid the national lockdown to fight the spread of COVID-19. Because of this, Minister Creecy hosted a virtual Youth Environment and Sustainability Dialogue where young people presented a wide range of ideas and suggestions on how to rebuild the economy and society post Covid-19.

The engagement took its cue from President Ramaphosa's the Youth Day

Message in which he had challenged young South Africans to craft and design programmes to enable the country to reach its developmental goals and address the unemployment crisis. During the Dialogue, the youth pushed for an economic recovery from Covid-19 that is just, green, inclusive and youth and gender-responsive.

In this edition, we also bid a fond farewell to a leader who has been associated with this organisation more than a decade. Ms Nosipho Ngcaba built an illustrious career in this department over many years at various levels of authority.

After her appointment as the Director-General in 2008, she effectively turned this department into an organisation with sound value system founded on strengths of individuals and integrity.

While paying tribute to her incomparable work in this edition, we also get to know what makes her tick. Her commitment to the public service was validated by her receipt of the gold award as the top performing Head of Department at the inaugural Batho Pele Excellence Awards in 2013.

Our writer Veronica Mahlaba sat down with the Director-General a week before her departure to understand her journey, while also seeking to understand how she was able to inspire the organisation over the twelve years she served as the accounting officer

We wish the DG all the best in her new endeavour.

Sustainably Yours

Albi Modise
Head of Communications & Advocacy

Meet our team

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**WORLD ENVIRONMENT DAY
5 JUNE 2020**

TIME FOR NATURE

#WorldEnvironmentDay | #TimeForNature | #GoodGreenDeeds



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**WORLD
ENVIRONMENT
DAY**



UN
environment
programme



What is Environment Month?

By Erica Mathye

Environment Month is celebrated annually in South Africa during the month of June. This year, the celebrations and participation took place via online communication due to the Corona Virus outbreak. Environment Month is one of the biggest months on our environmental calendar and an exciting time for citizens, governments, businesses, organisations and prominent voices to remind us all to take positive action in protecting the environment we live in. The United Nations declared three days in June to celebrate World Environment Day, World Oceans Day and Desertification and Drought Day. All days speak to the challenges facing the natural environment, including man-made challenges and the natural imbalances that affect the earth, and solutions to the challenges.

IMPORTANT DAYS DURING ENVIRONMENT MONTH

World Environment Day (5 June)

Significance: To raise awareness on environmental issues

2020 Theme: Time for Nature

Hashtags: #TimeForNature #WorldEnvironmentDay

Every year on 5 June, the world celebrates World Environment Day. The day aims to inspire every one of us to make our voices heard - to urge our governments to deliver on their commitments to safeguard nature, end pollution and ensure that environmental laws are upheld. This year's theme for World Environment Day is "Time for Nature" to emphasise the point that when we care for nature, we care for

ourselves. The Department of Environment, Forestry and Fisheries' Deputy Director-General: Biodiversity and Conservation, Mr Shonisani Munzhedzi delivered a message of support to the youth during a World Environment Day webinar.

"We believe that biodiversity is life, biodiversity is health, and biodiversity is economy. The recent National Biodiversity Assessment indicates that the country has more than 418 000 biodiversity related jobs straddling across protecting biodiversity, restoring ecological infrastructure, extractive use of biodiversity, biodiversity based tourism as well as research and professional services. I therefore call upon the young people to consider their career paths in some of these disciplines," he said.



About the contributor: Erica Mathye

Erica Mathye is the Deputy-Director: Editorial Services in the Chief Directorate: Communications. Before joining the department in 2015, she worked as a Chief Copy Editor for various magazine titles.



WORLD OCEANS DAY

World Oceans Day (8 June)

Significance: To inform the public of the impact of human actions on the ocean.

2020 Theme: Innovation for a Sustainable Ocean

Hashtags: #WorldOceansDay #OceansDay

South Africa is a maritime nation with jurisdiction over one of the largest exclusive economic zones in the world. It is uniquely surrounded by three ocean spaces (the Atlantic, Indian and Southern Ocean) offering a resource-rich and biologically diverse environment.

For 2020 World Oceans Day is growing the global movement to call on world leaders to protect 30% of our blue planet by 2030. This critical need is called 30x30. By safeguarding at least 30% of our ocean through a network of highly protected areas we can help ensure a healthy home for all!

“According to the World Register of Marine Species there are now 240,470 accepted species, but this is believed to be just a small proportion of the species that exist, with new marine life being discovered everyday.”

Interesting Facts About the Ocean

1. Our oceans cover more than 70 per cent of the Earth's surface.

With so much of the Earth's surface taken up by ocean, it's evident how vital these marine environments are to the planet, and how much there still is to be explored.

2. The majority of life on Earth is aquatic.

As so much of the Earth's surface is underwater, it comes as no surprise that marine species outnumber those on land. But, it's an incredible 94 per cent of the Earth's living species that exist within the oceans.

3. Over 70 per cent of our planet's oxygen is produced by the ocean.

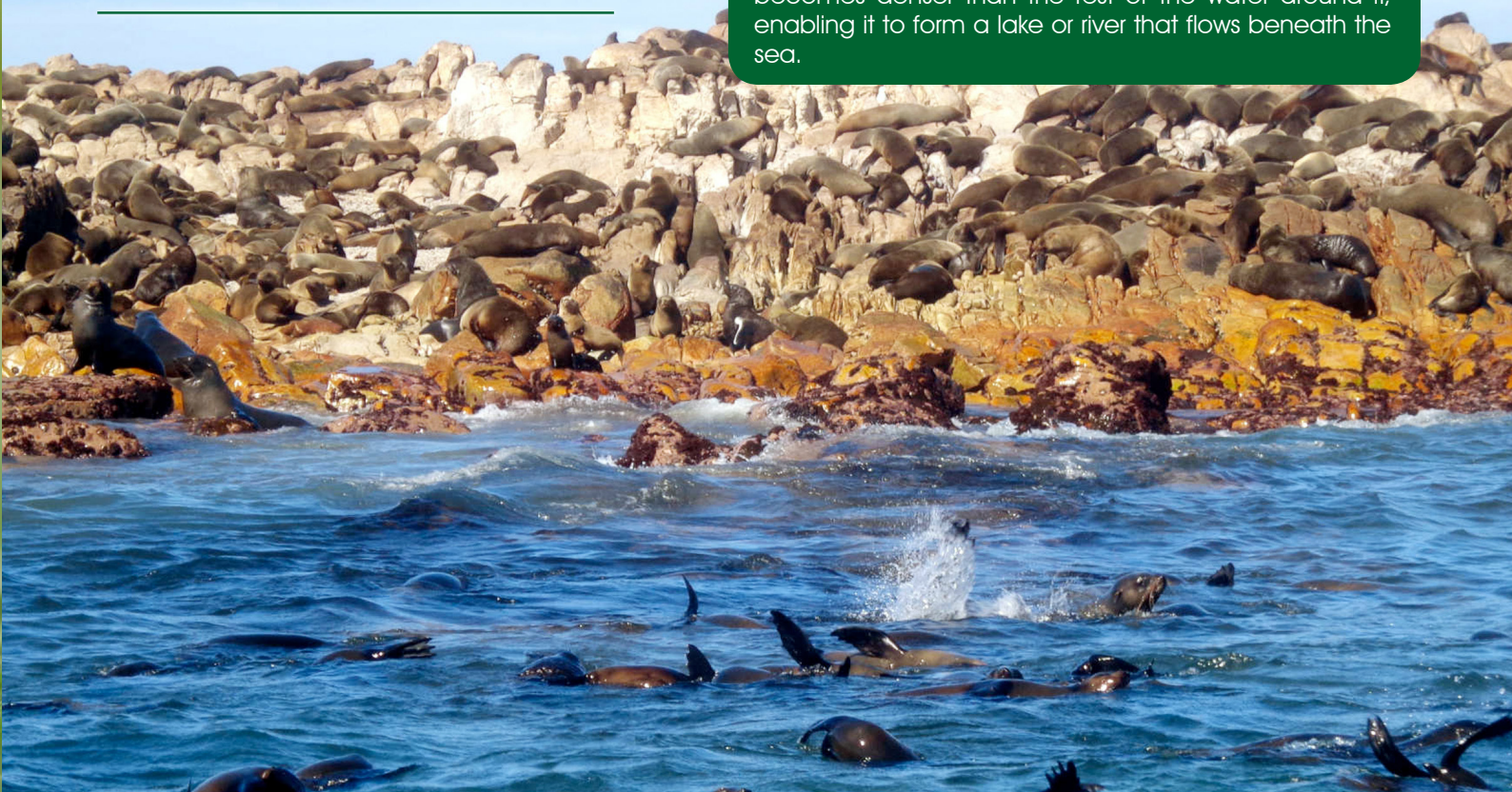
It's thought that between 70 and 80% of the oxygen we breathe is produced by marine plants, nearly all of which are marine algae.

4. We still only know a fraction of the marine species in our oceans.

According to the World Register of Marine Species there are now 240,470 accepted species, but this is believed to be just a small proportion of the species that exist, with new marine life being discovered everyday.

5. It's possible to find rivers and lakes beneath the ocean.

When salt water and hydrogen sulfide combine, it becomes denser than the rest of the water around it, enabling it to form a lake or river that flows beneath the sea.



8 June is World Oceans Day

Innovation for a Sustainable Ocean

World Oceans Day has been celebrated on June 8th every year since 2002. And while Covid-19 and social distancing are changing how we recognize our blue planet this year, the need for action is perhaps more important than ever.



#WorldOceansDay | #GoodGreenDeeds | #InnovationforaSustainableOcean

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WORLD OCEANS
DAY 2020
UNWORLDCEANSDAY.ORG



Desertification and Drought Day

Image by Busani Bafana

Desertification and Drought Day (17 June)

Significance: To raise awareness of the presence of desertification and drought, highlighting methods of preventing desertification and recovering from drought.

Formerly known as the World Day to Combat Desertification

2020 Theme: Food. Feed. Fibre



Above: Ms Margaret Gauti Mpofu adds manure to her vegetable crops in a field with a 20-litre plastic bucket filled with cow manure in hand, Mpofu expertly scoops the compost and sprinkles a handful besides thriving leaf vegetables and onions planted in rows across the length of the field, which is irrigated with treated waste water.

Mpofu's act of feeding the land is minuscule in fighting the big problem of land degradation. But replicated by many farmers on a large scale, it can restore the productivity of arable land, today threatened by desertification and degradation.

The Deputy Minister of Environment, Forestry and Fisheries Ms Makhotso Sotyü has urged South Africans to protect their land from over-use so that it can continue to provide us with food, water and energy to support our wellbeing.

"We all can play a role in combating the effects of desertification. As individuals and corporates, we need to change our behaviours, adopt efficient land use planning and more sustainable land management practices. This will enhance the capacity of land to provide a wide range of goods and services. This call is more relevant even as government continues to facilitate the transformation that is fundamental for the future of this country," said Deputy Minister Sotyü.

"Deputy Minister has urged South Africans to protect their land from over-use so that it can continue to provide us with food, water and energy to support our wellbeing."

Food. Feed. Fibre.
Sustainable production and consumption



Desertification and Drought Day

17 June 2020



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#FoodFeedFibre

#GoodGreenDeeds

#DesertificationAndDroughtDay



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Department of Environment, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



United Nations
Convention to Combat
Desertification



What is the Environment?

We hear about the environment everyday but most people never really think about what it is or what it means to them. Most of us can get away with describing the environment just as our surroundings such as the homes we live in, our countries, our governments, and so on. The environment consists of both living and non-living things.

Living organisms breathe, eat, grow, move, reproduce and have senses. These include human beings, plants and animals. Non-living things on the other hand are the opposite of living things as they do not have senses. If you studied Geography in school, you may describe non-living things as the air we breathe, the water we drink, the sun and beautiful moon that shines at night.

Why should I care?

Section 24 of the South African Constitution states that everyone has the right to an environment that is safe and not harmful to their well-being. The environment is home to living and non-living things. All life on earth depends on the environment. Sometimes even with our best efforts, we cannot prevent some of the natural disturbances that happen to our environment including floods, volcanoes and veld fires. Human made disturbances to the environment include increasing populations, global warming and climate change, air pollution and deforestation.

Environmental issues we are facing today

Waste

In March 2019, President Cyril Ramaphosa launched the Good Green Deeds Campaign. This is a fantastic initiative and nation-wide call by government and the President to keep our communities clean. The waste that is created inland also finds its way into rivers and streams, ultimately landing in our oceans and posing extreme danger to aquatic animals, thereby impacting economic activity and food production.

The first step is to not litter and if you see litter, pick it up and bin it. We must be responsible to each other if we are to win the war against waste. Many organisations, businesses, government departments and households in South Africa have adopted the separation of waste at source method where they categorise waste according to glass, paper, plastic and metal. This collected waste is then sent to local buy-back centres for recycling. The Department of Environment, Forestry and Fisheries continues to work with local municipalities, communities and other key stakeholders to help communities clean-up illegal dumping sites.



Above: iSimangaliso Wetland Park is the third largest protected area in South Africa. There are five predominant interlinked ecosystems found in the iSimangaliso Wetland Park. The species list of iSimangaliso Wetland Park are of the lengthiest in the region. Over 6500 plant and animal species including 521 bird species. The diversity of habitats (Aquatic, Coastal, Wetland and Terrestrial) supports an impressive array of animal species. (Photo by UNESCO).



Above: Polluted air at Masakhane, just outside eMalahleni (Witbank), with Duvha coal power station in the background. (Photo by Greenpeace).



Above: President Cyril Ramaphosa unveils the Good Green Deeds mascot, Billy Bin at Sisa Dukashe Stadium in East London on 8 March 2019. (Photo by Salome Tsoka).



Above: The former DG is seen here during the 2019 World Environment Day in Mamelodi with the current Minister of Environment, Forestry and Fisheries, Ms Barbara Creecy, Deputy Minister Ms Maggie Sothy and the UNEP Regional Head, Ms Cecilia Kinuthia-Njenga. (Photo by Veronica Mahlaba).

Climate Change

Climate change is a global challenge that has to do with an increase in the earth's temperature. As the weather becomes drier, there are adverse effects on water, food production, storms and floods. Partnerships, ambition and commitment are necessary actions for tackling global climate change.

South Africa has recently implemented carbon tax, and announced a massive renewable energy programme in its latest electricity plan. The more we reduce our carbon emissions, the better our chances of reversing the impacts of climate change. Some starting points include switching to zero emission vehicles or non-motorised transport.

Air pollution

Breathing in polluted air poses health illnesses related to asthma, cancer, heart diseases, skin irritations, headaches, dizziness, fatigue, stress, nervous disorders and birth defects. The Department has developed the South African Air Quality Information System (SAAQIS) App which is available for android and apple devices. Information found on the app as well as new regulations regarding air quality are also available on the SAAQIS website.

The app gives you live readings of the state of air as it is measured in the monitoring stations. The department also hosts Air Quality Lekgotlas on an annual basis for the past 15 years to provide a platform for air quality officials from across the country to discuss and workshop issues regarding air quality.

Rhino poaching

The department recently welcomed the conviction of two men who were arrested in April 2020 for the illegal possession and transportation of 181 rhino horn. For decades, rhinos have been hunted and killed for their horn prized for its medicinal, ornamental and aphrodisiac properties. The black rhino remains critically endangered.

The Black Mambas is a 26-member female gang tasked by the The Department of Environment, Forestry and Fisheries to assist with the conservation and protection of the rhino at the Kruger National Park.



Above: The carbon tax is an important step on the road for South Africa to meet its commitments in terms of the Paris Agreement on Climate Change and to reduce its greenhouse gas emissions. (Photo by Oupa Nkosi).



Above: In terms of Section 24 of the Constitution, as well as the National Environmental Air Quality Act (AQA, 2004), government is charged with the role to ensure that South Africans are breathing air that is not harmful to their health and wellbeing. Several spheres of government monitor the state of air quality across the country at over 130 fully automated air quality monitoring stations.



Above: The southern African countries of Namibia, Zimbabwe and South Africa hold 90% of Africa's remaining black rhinos and white rhinos. (Photo by Africanews.com).

“Living organisms breathe, eat, grow, move, reproduce and have senses. These include human beings, plants and animals.”

DG opens a new chapter

By Veronica Mahlaba

Images by Madimetja Mogotlane and Veronica Mahlaba

In this exclusive interview, former Director General Ms Nosipho Ngcaba talks candidly about her personal future plans after leaving the department, what she will miss most and her advice to the young people of South Africa.

Born in Mqanduli in a small rural village in the Eastern Cape, Ms Nosipho Ngcaba was raised by her parents who were shop owners. She furthered her studies at the nearby town of Engcobo and then she spent two years at the University of Limpopo in Turfloop where she was registered for pharmacy. It was here where her studies were disturbed by her involvement in student political activities, as she went on to work underground alongside the former Deputy Minister Ms Rejoice Mabudafhasi and the late former ANC Youth League President Mr Peter Mokaba.

Passion becomes her destiny

Ms Ngcaba completed her studies with a BSc Degree with a focus on physical science and mathematics at the University of Western Cape. She said her passion for the environment started during her studies as her majors were Biochemistry and Physiology. "Life and plant life were one of my interests. I loved Biology and that's where I can say the seed was planted."

She has also completed the Harvard University Development Programme and is currently doing her MBA.

Her drive and motivation

It is inner peace. I like peace, in fact one of the things that really push me out is negativity. I don't like being in a negative space. So I am driven by positivity, seeing good and commitment. Having been an activist during apartheid, one of the issues I was faced with were environmental injustices. We deal with a unique area of work.

Her secret passion in environment

Ms Ngcaba doesn't hesitate to mention that she loves the Biodiversity and Conservation Branch and also the Environmental Programmes Branch.



Above: DG leaves the Department after 15 years of service.



Above: DG speaks during the memorial service of late Minister Dr Edna Molewa.



About the contributor: Veronica Mahlaba

Ms Veronica Mahlaba is a Senior Communication Officer at the Department of Environment, Forestry and Fisheries serving under the Communications Chief Directorate. Ms Mahlaba has experience as a Lecturer in the Media Studies Department at a private college.

She expressed that they are like her children as they touch lives and the empowerment work that is delivered through them makes the Department different.

"We care, it is innovation at its best. They use standard mechanisms to either build boardwalks in a park or in a beach area using labour intensive methods. You could clear invasive plants by chemical treatment but we opt to clear invasive plants with labour intensive methodology. That is quite a different way of delivering a service. It is about innovation, knowing what society requires and it has to educate."

She further explains that it is pleasing to see people who don't have a science background connect with an infrastructure that is compatible and built in their communities. For instance, when you rehabilitate ecosystems in a manner that makes people see that you are ensuring water security.

"They can see the water oozing after rehabilitation. That is life changing. I am passionate about such. That's why I like Biodiversity. It's the base of life and I think the Environmental Programmes just elucidates that. This doesn't mean I don't like other sections, but those two are my secret loves," she said laughingly.

Advice to women in leadership

Be yourself. It has taken me to be given an opportunity, nothing else. The same happens with men. Don't think that people who become DGs or are in senior management are made from heaven. It just takes people to believe in you and your belief in yourself.

So young people, there's an opportunity out there. I am 54 years old now and going on early retirement in terms of being a DG. I am still going to work, but the hours I have put in working as a woman leader, I have done diligently because I told myself that I am going to master it and do the best I can and I think I have done it. What I was not able to do, was beyond my capabilities or control.

Her last words to DEFF staff

DEFF has been my family. I have spent 90% of my time in this Department for the past 15 years. When I was the Chief Operating Officer, I gave it my all. So I am going to miss the staff of this Department. I am going to miss the contradictions that happen within the staff and those contradictions have shaped me to see what drives individuals and human beings. I have learned a lot from DEFF and especially from those who are levels below management. Those who have reached out to me, I think I have made my contribution to get them to where they wanted to be.

People must commit themselves and rededicate themselves. They must not take it that when I am gone, that's the end of the world. What we have to embrace is that this is a change that is necessary and let us get ourselves ready to continue to make a positive contribution.



Above: The outgoing DG receives a photo collage frame from Working on Fire.



Above: The outgoing DG receives a photo collage from Minister Barbara Creecy (right) and Deputy Director-General: Biodiversity and Conservation Mr Shonisani Munzhezdi.



Above: The Director from Human Capital Management Ms Isa Qaqane bids farewell to the DG with a COVID-19



Above: The outgoing DG receives a gift from the Deputy Director-General: Corporate Management Services, Ms Limpho Makotoko.

Farewell to an environment icon

By Dimakatso Tsutsubi



The South African Environmental Sector has reached unprecedented growth levels through the efforts of a warrior, a true icon, a woman leader who knows no colour or level and always had a heeding heart. Sadly she leaves the department during an era that makes it impossible for her fellow colleagues, to come and personally say thank you DG as the entire world battles with the impacts of the Corona Virus.

The 29 May 2020 was a day marked with pride and sadness in the environment sector as it bid farewell to one of its prominent, most admirable soldier Ms Nosipho Ngcaba, who served as the Director-General for the Department.

Her indelible efforts, hard work and dedication will continue to leave a permanent mark on those that had the pleasure and honour of working with her.

Ms Nosipho Ngcaba began her career in 1997 and worked her way through the department from being a Director, Chief Director, Chief Operating Officer and finally to the helm of the Director-General, since 2008. During her time in office, Ms Ngcaba was applauded for her work, receiving awards for being the Top performing head of department in 2013 and in 2015. She held her demanding position in a very technical environmental industry.

She contended with issues of interpreting environmental legislation, radical transformation within the sector, managing the environmental inter-governmental provincial coordination, creating and benchmarking with international best practices on environmental issues to profile and craft a position for South Africa to fit in the now and ongoing constraints of the climate change accord. Ms Ngcaba vacated her office as the Director General for Environment, Forestry and Fisheries, to pursue and advance her career outside of the department.

Ms Ngcaba led a huge team of experts, scientists and environmentalists, within the sector and her drive to recruit the most qualified, historically disadvantaged individuals to join the sector was an effort to create a much more formidable human capital stable. She knew each employee by name and was never marginalised by level.

In her last words of encouraging officials to be steadfast and committed to service, she said, "You should always do your work in this very competitive industry, even in my absence, you are true leaders and good labour reps."

Some of the DG's key achievements:

- Pioneering a DEA Green Building PPP project which led to the building receiving a 6 star SA rating from the Green Building Council of South Africa (GBCSA), the first national department to ever achieve this endeavour in South Africa.
- Automation of document management system through introduction of Electronic Document Management System (EDMS) and Introduction of the Balanced Scorecard System and subsequent automation thereof.
- The Gold Award as the top performing head of department, at the inaugural Batho Pele Excellence awards in 2013. She subsequently won this award again in 2015.
- A lifetime Achievement award at the Eco-Logic Awards in 2016. The award recognised an individual whose actions have conserved, nurtured or restored the earth's life forms, ecosystems or natural resources.
- The department was ranked among the top 5 performing departments by the Department of Performance Monitoring & Evaluation through the Management Performance Assessment Tool.



About the contributor: Dimakatso Tsutsubi

Ms Dimakatso Tsutsubi is the Chairperson for PSA at the Department of Environment, Forestry and Fisheries.

HAY'KHONA CORONA!

YOUR ACTIONS CAN SAVE LIVES!



CORONA VIRUS (COVID-19) HAS ALREADY KILLED MANY PEOPLE AROUND THE WORLD. PROPER HANDWASHING CAN BE THE DIFFERENCE BETWEEN LIFE AND DEATH.

WASH YOUR HANDS AND STOP THE SPREAD!

1

Wet your hands and put soap on them.



2

Scrub all sides for 20 seconds including palms, back of your hands and in between your fingers.



3



Sing the "Happy Birthday" song two times to remember to spend 20 seconds washing.

4

Rinse well with clean water.



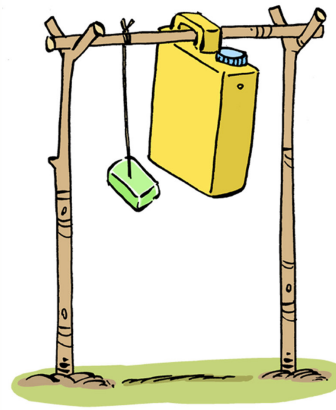
5

Dry with a clean cloth or wave your hands in the air.



6

If you don't have running water, make your own tippy tap ...



... or use alcohol-based hand sanitiser.

IF YOU TAKE CARE OF YOURSELF, YOU TAKE CARE OF OTHERS!



environment, forestry & fisheries

Department:
Environment, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA



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PROTECT SOUTH AFRICA
TOGETHER WE CAN BEAT THE CORONAVIRUS

DEFF lends a helping hand during COVID-19

While the world comes to terms with the impact and effect of the Corona virus, the Department of Environment, Forestry and Fisheries reached out to the most vulnerable communities in various parts country, delivering food parcels and bringing some much-needed social relief.

FREE STATE

Deputy Minister delivers food hampers

By Salome Tsoka

While the world continues to grapple with the impact of the Corona Virus, the Deputy Minister of Environment, Forestry and Fisheries Ms Makhotso Soty together with the Free State MEC for Economic and Small Business Development, Tourism and Environmental Affairs Mr. Makalo Mohale and the South African National Parks (SANParks) led an initiative to deliver food hampers that would benefit 250 households living in the communities near the Golden Gate Highlands National Park in the Free State on 30 April 2020.

This initiative is part of the SANParks response to the coronavirus, which will see a total of R6 million used to purchase food parcels, hygiene products, educational materials and water tanks to support and benefit 7 500 families living near national parks around the country. Many of the beneficiaries from these communities rely on the national parks for their survival, either through jobs or business opportunities.

Speaking to the local Chiefs and Mayors of the identified communities, Deputy Minister Soty indicated that this initiative was funded by the SANParks Honorary Rangers and the United Nations Development Programme (UNDP).

“This initiative is part of the SANParks response to the coronavirus, which will see a total of R6 million used to purchase food parcels, hygiene products, educational materials and water tanks to support and benefit 7 500 families living near national parks around the country.”



Above: The food parcels included staple foods such as maize meal, cooking oil, tinned products, vegetables as well as soap, a hand sanitiser and reusable masks.



Above: Beneficiaries of the food parcels included the unemployed as well as child headed households with no other sources of income.



Above: Deputy Minister Soty speaks to King Moremoholo Mopeli at the Maboela Village in the Free State.



About the contributor: Salome Tsoka

Ms Salome Tsoka holds a BA Degree in Journalism from the University of Johannesburg and has been writing for as long as she can remember. She is a Senior Communication Officer in the Chief Directorate: Communications at the Department of Environment, Forestry and Fisheries.



Above: A fisherman from the Hout Bay area receives his food parcel.



Above: Food Parcels being prepared for handover in Hout Bay.

WESTERN CAPE Minister donates food parcels to fishermen

By Tshego Letshwiti

The Department in partnership with FishSA, Oceana, major fishing corporations and the SA Fishing Development fund distributed over 10 000 food parcels to distressed small-scale and interim relief fishers during the lockdown, throughout the country.

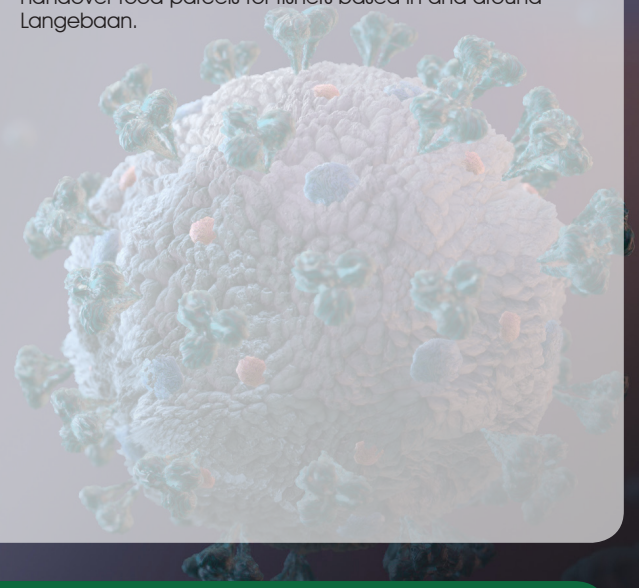
Small-scale fishing communities in the Western Cape were initially adversely affected in January and February this year during the Covid-19 pandemic in China when restaurants closed and fishers were unable to sell abalone and West Coast Rock Lobster to their traditional marketers. Consequently, some sections of the fishing industry have felt the impact of the Corona Virus longer than other sectors of the economy.

The department distributed food parcels to fishers in areas such as Hout Bay, Langebaan, the Overberg region, Khayelitsha and Witsand in the Western Cape. Distributions were also made in the Eastern Cape and Kwa Zulu-Natal throughout the month of May.

“The generosity of Fish SA, the SA Fishing Development Fund as well as several large scale commercial fishing companies has made this possible and I want to thank them for taking the initiative to help thousands of families in distress,” said Minister Barbara Creecy.



Above: DEFF officials and Oceana representatives handover food parcels for fishers based in and around Langebaan.



About the contributor: Tshego Letshwiti

Ms Tshego Letshwiti is the Assistant Director in the Chief Directorate: Communications at the Department of Environment, Forestry and Fisheries, in Cape Town. She joined the Department in February 2014 after working in print and broadcast Media. She holds a BA Honours Degree in Journalism from the University of Johannesburg.

Karoo BioGaps Project pushes boundaries

By Zimkita Mavumengwana and Dane McDonald

Images by Nicolas Telford, Ismail Ebrahim and Ian Engelbrecht

The Karoo BioGaps Project has steadily pushed the scientific knowledge boundaries across 14 taxonomic groups between the 2016 to 2019 lifespan of the project. The project findings include landmark achievements like the description of two new scorpion and other animal and plant species, and 'big picture' contributions to the Karoo biodiversity dataset.

According to Karoo BioGaps Project Principal Investigator Domitilla Raimondo, the Karoo was traditionally one of the least explored regions of South Africa. "It was poorly sampled for biodiversity and there were large gaps in our understanding of which species occurred in parts of the Karoo - this hampered efforts to determine priority habitats that may be sensitive to future proposed changes in land use," she says.

Informed decision-making

However, says Raimondo, the Karoo has been identified as an important development area for South Africa and therefore it was considered essential to understand the biodiversity of the region. This understanding would contribute to an informed decision-making process regarding potential development plans, such as the possibility of shale gas extraction or assigning mining concessions in the area.

The Karoo BioGaps Project was undertaken from 2016 to 2019 and involved over 20 institutions led by

the South African National Biodiversity Institute (SANBI) as the grant holder of the funding for the consortium. The data generated in the first year of the project fed into the Shale Gas Strategic Environmental Assessment (SEA). The SEA has successfully informed decision-makers regarding the biodiversity sensitivities present across the Karoo.

In addition, spatial data for all Karoo species of conservation concern has been included in South Africa's decision support portal as of December 2019. This means that any development application taking place in the Karoo that needs to comply with the Environmental Impact Assessment (EIA) Regulations 2014 can register their development footprint on this National Web based Environmental Screening Tool which now contains much more information for species of special concern in the Karoo.

Pushing boundaries

Fourteen taxonomic groups were studied through the Karoo BioGaps Project: plants, mammals, fish, birds, amphibians, reptiles, fungi and nematodes and six groups of invertebrates: bees, dragonflies, grasshoppers, scorpions, butterflies and spiders. Despite climatic conditions not being ideal for gathering comprehensive data as very poor rainfall was recorded in many areas in the Karoo during 2016 and 2017, some very exciting discoveries have been made through the project.

About the contributors: Zimkita Mavumengwana and Dane McDonald

Zimkita Mavumengwana is the Outreach and Programme Officer at SANBI.

Dane McDonald is the Science Communications Officer at SANBI.



Above: *Cordylus cloetzi* - one of the lizards to undergo a taxonomic update as a result of the Karoo BioGaps Project.



Above: The new *Bulbine grilliformis*.



Above: A *Stasimopus* spider.

Previously misidentified species and new species being described for the first time through this project include:

- Two new scorpion species.
- A plant species – an undescribed cat's tail (*Bulbine* genus) in the Aloe family that will be named *Bulbine grilliformis*.
- Numerous new species of trapdoor spiders have been found in the families Nemesiidae and Ctenizidae (genus *Stasimopus*), and two new species of ground wandering spiders in the genus *Megamyrmaekion*.
- Likely three new ground nematodes (roundworms) have been discovered. They are important indicators of soil health.
- For freshwater fish, the taxonomic revision of *Enteromius anoplus* will result in resurrection of two species and description of one new species endemic to the Eastern Cape. Additional new species, one in the genus *Pseudobarbus* and another one in the recently erected genus *Amatolacypris* are being described.
- At least one new *Fusarium* species (a large genus of filamentous fungi important for soil health).
- Potentially several new grasshopper species.
- A new reptile species has been confirmed and will be described

Taxonomic revisions are also being compiled for several snake, lizard, and grasshopper and fish species. Taxonomic revisions mean that a particular species or genus group has been re-assessed in terms of its phylogeny (its genetic family-tree), and this work has revealed that the species had been incorrectly classified previously', says Prof Krystal Tolley, molecular ecology expert and lead researcher for reptiles and amphibians on the Karoo BioGaps Project.

The Karoo BioGaps Project is a FBIP (Foundational Biodiversity Information Program) project, a joint initiative of the Department of Science and Innovation (DSI), the National Research Foundation (NRF) and SANBI.

Summary of the project achievements

Summary of overall achievements of the project
The project provided research opportunities for young scientists. It also piloted novel approaches in engaging and developing citizen scientists. The project contributed a large amount of material to natural science collections which can be used for taxonomic research. The data collected will also contribute to future National Biodiversity Assessments and possibly also to improving ecosystem classifications and vegetation mapping. Some of the project achievements include the following:

- A total of 232 533 new species records are now available to scientists.
- 10 students involved in the project.
- 300 Red List assessments of species in the Karoo.
- 1000 species pages compiled to describe Karoo species.
- 864 compliant DNA barcodes uploaded to the Barcode of Life.
- At least 13 scientific papers are published, 4 are under review and approximately another 18 are in progress.
- All data for species of conservation concern have been included in South Africa's decision support portal <https://screening.environment.gov.za/>.

Karoo species still need your help!

Over 370 people contributed to the citizen science component of the project – many of them Karoo locals. Some 24 863 observations of 3304 species were collected. 747 people helped with identifications. An amazing effort, thanks to all! Please continue contributing on iNaturalist. Due to the drought, lots of species were not seen during the study, and more data is needed on rare species and those that prefer wetter cycles. Not only animals and birds, but also plants, insects and fungi. Ongoing data will allow us to assess climate change and changing patterns of rarity. Your help is invaluable. See <https://www.inaturalist.org/projects/karoo-biogaps?tab=species>

SA supports innovation in oceans

By Gaopalelwe Moroane and Tshego Letshwiti
Images by Millicent Makoala and Diane Le Gouvello

This year South Africa joined the world in celebrating World Oceans Day on 8 June 2020 under the theme: Innovation for a Sustainable Ocean.

As the challenges to the ocean continue to grow, so does the need for novel solutions and the people driving them. South Africa hasn't been left behind in the innovation of tools to manage and protect South Africa's coastlines. One such tool is the national Ocean and Coasts Information Systems (OCIMS) developed by the Department of Environment, Forestry and Fisheries (DEFF) in partnership with the Department of Science and Innovation.

The system relies on several government agencies contributing their specialised data or information to a central platform to create products that can be used by the shipping, fishing and aquaculture industries.

At present the OCIMS system is designed to do the below:

- Track vessels around the South African coast to assist in vessel operations;
- Pollution incident management;
- Search and rescue and monitoring fishing by larger vessels in offshore marine protected areas;
- Provide alerts on algal blooms that may be potentially dangerous to coastal users and fish farms and;
- Other tools allow for coastal managers to gather and display information of different ocean uses.

Below are short overviews of the tools available on this innovative website.

Marine Spatial Planning Support Viewer

Marine Spatial Planning (MSP) Support Viewer Decision Support Tool (DeST) provides consolidated view of data sources that can inform MSP and the development of Marine Area Plans (MAPs). The MSP Support Viewer DeST contains relevant and accessible spatial data from authoritative sources and use a merged data source approach for data assimilation. Further developments will focus on the first MAP area (i.e. Knysna to Port Elizabeth) and introduce a theme base structure for the data.

Coastal Flood Hazard Decision Support Tool

The Coastal Flood hazard support tool on OCIMS provides disaster managers, spatial planners and the general public with an estimate of coastal areas that are potentially at risk of flooding. This tool intends to give a first indication on which areas are at risk of flooding. It can be used for populated areas but also for currently undeveloped areas to assess whether future development might be at risk.

Integrating climate change adaptation and disaster risk reduction measures through a risk management approach will help to reduce future losses from flood events.



About the contributor: Gaopalelwe Moroane

Ms Gaopalelwe Moroane is the Assistant Director in the Chief Directorate: Communications at the Department of Environment, Forestry and Fisheries, in Cape Town. She joined the department in 2012 as an intern after completing her studies at Rhodes University.

Integrated Vessel Tracking Decision Support Tool

The Integrated Vessel Tracking tool provides the capability of monitoring vessels movements based on both transponder information (such as AIS), Vessel Management System (VMS) and Long Range Identification and Tracking (LRIT) as well as coastal radar and airborne surveillance, as well as vessels detected using SAR data and provides notifications when vessels are within Marine Protected Areas.

Regular surveillance of territorial sea areas is increasingly important for coastal nations. Signatories to the United Nations Convention on the Law of the Sea (UNCLOS) can establish a territorial sea out to 12 nautical miles from the coastline and an Exclusive Economic Zone (EEZ) of up to 200 nautical miles.

Fisheries and Aquaculture Decision Support Tool

South Africa's west and south coasts have frequent occurrences of Harmful Algal Blooms (HAB). The Fisheries and Aquaculture Decision Support Tool provides a capability for monitoring and assessing risk of HAB events for the South African coastal area to approximately 50 km offshore.

Water Quality Decision Support Tool

The purpose of the Water Quality Decision Support Tool is to provide support to coastal managers' decision making processes by providing a consolidated view of various remote-sensed and in-situ sources of water quality data.

It is also expected that scientists and researchers will need access to consolidated and integrated datasets that allow for understanding of historical conditions and comparison with other, relevant datasets.

Marine Predators Decision Support Tool

The Marine Predators Decision Support Tool gives members of the public and scientists the ability to view marine predator observation data captured from iNaturalist, marine predator sightings data captured from the SEAFARI mobile application and boat-based whale observation data from the Department of Environment, Forestry and Fisheries (DEFF) on a map.

The Coastal Operations at Sea Decision Support Tool

The Coastal Operations at Sea Decision Support Tool (DeST) provides a capability for monitoring and predicting ocean and sea state variables in the coastal ocean using state-of-art forecasts of winds, currents and waves, which are provided by numerical models that simulate and predict ocean and atmospheric conditions.

Ocean and atmosphere general circulation models are complex mathematical models, that use the Navier-Stokes equations on a rotating sphere as the basis for computer programs to simulate the Earth's atmosphere or oceans on a range of spatio-temporal scales.



Above: The African Penguin (*Spheniscus demersus*) is Africa's only extant penguin. (Photo by Millicent Makoala)



Above: A Loggerhead turtle. (Photo by Diane Le Gouvello)



Above: DEFF's benthic camera (ski-monkey) used for underwater observations aboard the SA Agulhas II. (Photo by Tshego Letshwiti)



Above: Samples of dissolved oxygen, dissolved alkalinity, nutrients and chlorophyll being taken from the Conductivity Temperature Depth (CTD) device. (Photo by Tshego Letshwiti)

Buffalo City pilots hazardous waste project

By Crystal Baloyi



Above: Some examples of Harzadous Household Waste.

The Department in partnership with the Swedish Environment Protection Agency (SEPA) have in September 2016 identified Buffalo City Metropolitan Municipality to develop and pilot a collection system for household hazardous waste.

Waste characterisation is also meant for data gathering in order to provide baseline information for future waste management options which may be used for recycling campaigns and targeted information towards households.

The results from the study indicated that households in more affluent areas generate more than two times more waste per year compared to households in lower and middle-income sampled areas. Small quantities of hazardous waste and Waste from Electrical and Electronical Equipment (WEEE) were found in all sampled areas. Typical hazardous fractions include chemicals, batteries, lamps, pharmaceuticals and pesticides.

Most common WEEE found in general waste were electrical water kettles. Absorbent hygiene products are the biggest waste fraction after food waste. The dominant products found in absorbent hygiene fraction were disposable children diapers. Packaging waste made of paper, plastic, metal and glass constitutes 30% of the waste composition found in all study areas.

“Absorbent hygiene products are the biggest waste fraction after food waste. The dominant products found in absorbent hygiene fraction were disposable children diapers.”

Buffalo City was selected for the Project on the basis that DEFF has a project in the city and five other municipalities to pilot the implementation of a Zero Waste Strategy for diversion of certain waste streams from landfill disposal. The project aims to:

- test a suitable collection methodology for the separation at source of hazardous components from the general waste components generated at household level and to facilitate their environmentally sound management thereof;
- to divert hazardous waste from disposal at municipal landfills not designed to accommodate such waste streams; and
- to increase awareness among the piloted households as well as the general public on what is hazardous waste, why it should not be mixed with general waste and how it should be handled.

These objectives are coincidentally in line with the objectives of the Good Green Deeds presidential programme which was launched in Buffalo City in 2019.

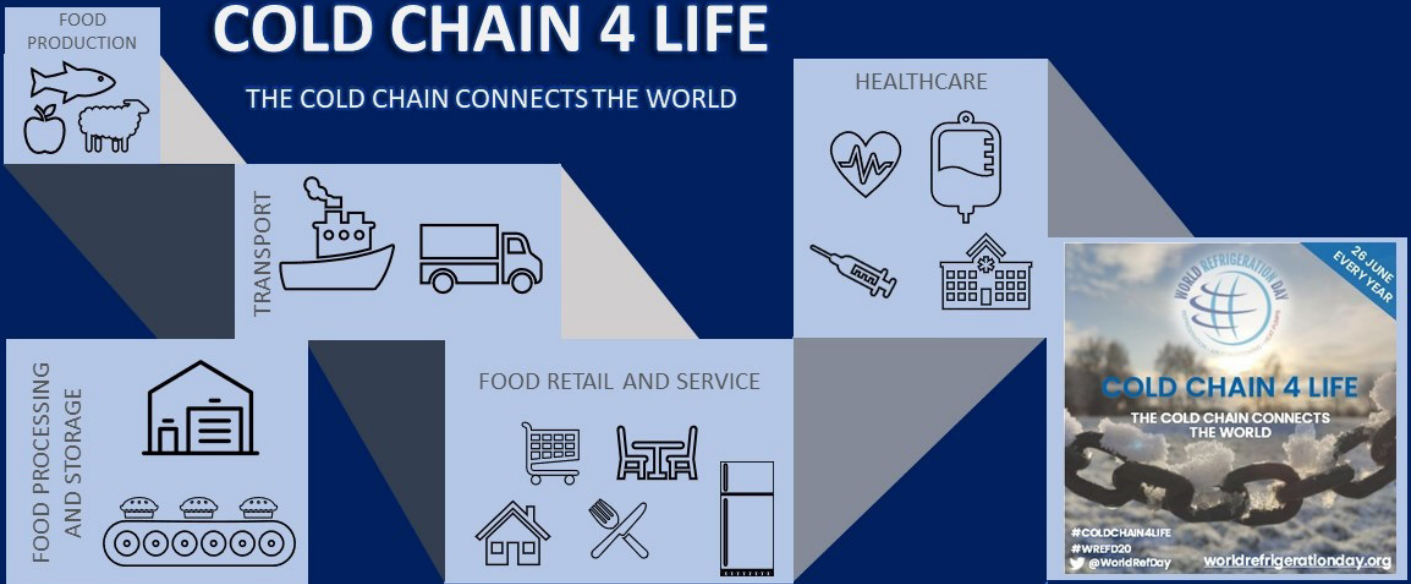


About the contributor: Crystal Baloyi

Mr Crystal Baloyi is the Control Environmental Officer: Grade A under Hazardous Waste Management Directorate at the Department of Environment, Forestry and Fisheries.

WORLD REFRIGERATION DAY

26 June 2020



Is an International day established international commemorative day that raises awareness about the refrigeration and air-conditioning industry and its contribution to modern life, as well as its connection to key societal objectives including mitigating climate change, protecting the ozone layer, and achieving the sustainable development goals (SDGs). WRD is organized each year on 26 June, the birth date of Lord Kelvin after whom the Absolute temperature scale (the "Kelvin Scale") is named. In February 2019, the United Nations Environment Programme pledged support at the UNEP national ozone officers meeting in Paris. The World Refrigeration Day was inaugurated on 26 June 2019.

This year's theme is: **The Cold Chain; role of the Cold chain sector in food safety and security, and human health**

The theme chosen for World Refrigeration Day in 2020 celebrates the importance of the food cold chain in sustaining life. The cold chain links producers and growers across the world to the domestic refrigerator in our kitchens, and it is essential for so much more than food. Vaccines must remain chilled until they are used by medical professionals around the world, and the cold chain is essential for blood transfusions and organ donor transport and storage. The ColdChain4Life campaign is organized by the UN Environment Programme (UNEP), ASHRAE, European Partnership for Energy and Environment (EPEE), International Institute of Refrigeration (IIR), and the WRD Secretariat. "World Refrigeration Day is a great opportunity for all of us to celebrate the tremendous contribution that refrigeration and air conditioning makes to our societies. This includes enabling our agricultural and food systems to harvest, store, transport and sell the foods that nourish us all. The cold chain is what makes this possible," said James Curlin, Acting Head of UNEP OzonAction. Celebrating this day shines the light on great work of the refrigeration and air conditioning sector, which is vital for the success of the Montreal Protocol.

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Fisheries welcome donation of face masks

By Abongile Ngqongwa



Above: Abongile Ngqongwa (Acting Director: Small-Scale Fisheries), Sue Middleton (Acting Deputy-Director General: Fisheries Management Branch) and Dr Mark Botha (CEO: SA Fisheries Development Fund).

It is a known fact that it is the poor and destitute communities that are most vulnerable and at risk during the current global pandemic of Covid-19. During these very disconcerting times, the corporate sector in South Africa stepped up to the challenge and donated various supplies to various vulnerable communities across South Africa. This was as a result of President Cyril Ramaphosa's call for government's strategy to include a programme of increased social support to protect the poor and vulnerable households in our country.

On 2 June 2020, the South African Fisheries Development Fund (SAFDF) donated four thousand eight hundred (4800) masks to the Fisheries Management Branch of the Department of Environment, Forestry and Fisheries (DEFF) in Cape Town. Dr Mark Botha, the CEO of the SAFDF handed over the masks to the Acting Deputy-Director General Fisheries Management, Sue Middleton and the Acting Director, Small-Scale Fisheries, Abongile Ngqongwa.

These masks were intended to protect small-scale and interim relief fishers in the Northern Cape, Western Cape, Eastern Cape and KwaZulu-Natal fishing communities from the Covid-19 pandemic. The SAFDF Chief Executive Officer, Dr Mark Botha, says, "The Fund's mandate is to contribute towards the economic advancement and wellbeing of fishers in local fishing communities".

The DEFF's Fisheries branch welcomed this donation from the SAFDF and has already commenced with the distribution of these face masks to the various fishing communities. Majority of the masks were earmarked for the Western Cape interim relief/small-scale fishers who were participating in the Snoek run and harvesting of West Coast Rock lobster where the nature of social distancing is more of a challenge. The donation of the masks helped the Department in assisting communities to protect themselves and reduce the spread of COVID-19 while they secure their livelihood through fishing.

"These masks were intended to protect small-scale and interim relief fishers in the Northern Cape, Western Cape, Eastern Cape and KwaZulu-Natal fishing communities from the Covid-19 pandemic."

Another batch of masks was distributed by the department to small-scale fishers situated in and around the OR Tambo District Municipality in Eastern Cape. This district is one of the regions with high concentration in positive cases of Covid-19 and it is also a region with the highest number of declared small-scale fishers in the Eastern Cape. The remaining masks have been further distributed to small-scale fishers in KwaZulu-Natal.

The department wishes to thank the South African Fisheries Development Fund for their generosity and their continued support and partnership with the department and the small-scale fishing sector.



About the contributor: Abongile Ngqongwa

Mr Abongile Ngqongwa is an Acting Director: Small-Scale Fisheries Management at the Department of Environment, Forestry and Fisheries in Cape Town. He has been responsible for establishing the small-scale fisheries sector in the four coastal provinces. He has a MSc Degree from UCT specialised in Fisheries Management with a particular focus in Small-scale fisheries management.

Minister boosts shark conservation efforts

By Charlene Da Silva and Sven Kerwath

Due to growing concerns about the health of shark populations in South African waters, the Minister of Environment, Forestry and Fisheries, Ms Barbara Creecy, has appointed an Expert Panel to review South Africa's National Plan of Action for the Conservation and Management of Sharks (NPOA Sharks).

Sharks and their relatives – the skates, rays and chimaeras – comprise the cartilaginous fishes, a class of aquatic animals with more than 1100 species. Most of these grow slowly, mature late, and produce few offspring, compared with their relatives, the bony fishes. These life history parameters result in a limited ability to withstand fishing pressure and a longer recovery time in response to overexploitation. Sustainable fisheries for sharks are possible, but have to be very closely managed.

With over 200 species, South Africa has one of the most diverse shark faunas in the world and many species are caught in appreciable quantities in directed and non-directed shark fisheries. South Africa has well developed fisheries management systems for most of its fisheries and many challenges with regard to the sustainable management and conservation of sharks have already been identified in the South African National Plan of Action for sharks (NPOA-Sharks).

The plan had been reviewed internally by the department in 2018. The review indicated that South Africa made a lot of progress in implementing sustainable management practices in the last decade, but some challenges remain. Sharks are often caught as by-catch in fisheries that are managed for species that can sustain a higher fishing pressure and when species are caught across several fisheries, their monitoring, assessment and management is particularly challenging. Many shark species constitute keystone species and changes in their abundance might have negative consequences for the marine ecosystems in which they occur.

Taking cognisance of these challenges, the increasing conflict between different stakeholders from fishing sectors and eco-tourism operators and the ongoing public concern, the Minister decided to establish the nine-member Panel to review South Africa's National Plan of Action for the Conservation and Management of Sharks (NPOA Sharks) over a three-month period.

The panel represents a diverse range of expertise across the fisheries, and marine conservation science and policy field. The panel is chaired by Dr Sven Kerwath, Head of Large Pelagics, Linefish and Shark Resources Research in the department, who had lead the drafting of the NPOA in 2013, and convened by Dr Charlene da Silva, the department's shark fisheries scientist and co-drafter of the NPOA. The panel includes two international experts, Dr Andres Domingo, head of the Pelagic Resources Department at the National Aquatic Resources Agency of Uruguay (DINARA) who played a leading role in the development of National Plans of Action for Sharks and Seabirds in Uruguay, and Dr Rishi Sharma, a Senior Fisheries Officer at the FAO and internationally recognised expert in stock assessment. Local experts include Dr Alison Kock, a shark conservation scientist at SANParks,

Dr Kerry Sink, Marine Programme Manager at SANBI, a PEW fellow and technical lead for the establishment of South Africa's Marine Protected Area Network. The Panel further includes Ms Sarika Singh, a scientist and policy specialist within the Top Predator component of the Biodiversity and Coastal Research directorate, and Ms Zintle Langa, a Control Environmental Officer responsible for Marine Species and Ecosystem Management, who were involved in the drafting of South Africa's Biodiversity Management Plan for Sharks. Mr Saasa Pheeha, Acting Chief Director: Marine Resources Management, who has experience as a shark fisheries scientist as well as a senior fisheries manager, completes the panel.

The Experts have commenced with their work to examine structure, mechanisms and regulatory frameworks related to research, management, monitoring, and enforcement associated with shark fishing and trade of shark products in the South African context. Their review will provide the basis for a revision of the NPOA-Sharks and strengthen South Africa's efforts to constantly improve mechanisms to ensure responsible management and long-term sustainable utilization of these resources for the benefit of all.



About the contributor: Dr Sven Kerwath

Dr Sven Kerwath is a Specialist Scientist in the Fisheries Research and Development Chief Directorate at the Department of Environment, Forestry and Fisheries in Cape Town. Sven holds a MSc in Biology from Friedrich Alexander University in Erlangen, Germany and a PhD in Fisheries Sciences.

KwaZulu-Natal Sardine run

By Dr Carl van der Lingen and Dr Stephen Lamberth

Images by Blake Tyack and Mike Kalamadacos



Above: Aerial (drone's-eye) view of a large school of sardine off Scottburgh, 16 June 2020 (Photo by Blake Tyack).



Above: Sardine being packed at Scottburgh. (Photo by Mike Kalamadacos).

The KwaZulu-Natal south coast (exploded into frenzied activity in early June 2020 as large schools of sardine made their appearance, accompanied by a suite of predators including dolphins, seabirds, sharks and other piscivorous fishes. The arrival of the sardine on the KZN coast came as something of a surprise because restrictions that were imposed in South Africa as a result of the COVID-19 pandemic meant that fewer flights than usual were conducted in autumn by the KZN Sharks Board to monitor the movement of sardine along the Transkei coast. Reports from East London in mid-May 2020 of large aggregations of Cape gannets and dolphins moving northwards (G. Brett, pers. comm.) suggested that the sardine were moving through that area in autumn. And near real-time environmental data showed that inshore waters between East London and Port Edward were cooler than usual for much of May (Figure 2), indicating that the Agulhas Current had moved sufficiently offshore to allow the sardine passage up the coast.

Sardine schools were spotted off Port Edward on 31st May 2020 and the first successful beach-seine netting of the 2020 sardine run was made at Ramsgate on 1st June 2020, with good catches taken over the next few days at several locations including Umgababa and sardine initially being sold for R1 000.00 or more per 30kg crate (S. Stamatis, ADCAN Fisheries, pers. comm.). Average catches of 1½ to 2 tonnes have been taken by beach-seine nets during previous sardine runs, with a maximum of around 5 tonnes that can be processed (placed in brine, chilled, and then frozen for food or good quality bait) sufficiently rapidly after capture.

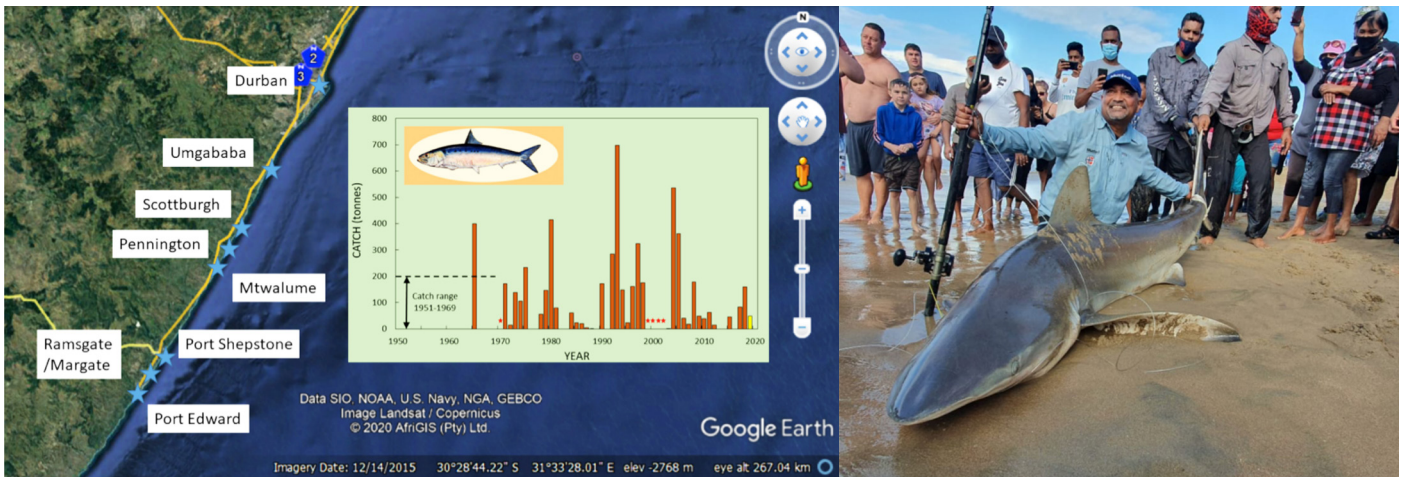
However, from the initial good catches until mid-June, most attempts caught small quantities of mixed bait fish (east coast round herring, chub mackerel, scad) and few sardine. Lots of sardine schools were observed around Mtwalume on 14th June, but heavy seas hampered fishing and few attempts were made. From mid-June onwards good catches have been taken at Pennington Beach, Scottburgh (Figures 3 and 4), and several other locations between Port Shepstone and Durban. Fish were around 20 cm total length and 70-80 g wet mass, typical of most sardine runs. The present (24th June 2020) oversupply of fish has meant that netters are struggling to sell their catch and sardine are presently selling for R50 per crate. Fish predators that follow the sardine run, especially sharks, are targeted by local anglers, and several large sharks (Figure 5) as well as other fish have been caught. Because they are preyed on by so many species and individuals off KwaZulu-Natal the sardine run represents a significant injection of nutrients into an otherwise oligotrophic (nutrient-poor) environment. Key exploited line-fish species such as garrick, dusky kob, geelbek and elf /shad that follow sardine to KwaZulu-Natal waters and feed on them there are among such beneficiaries.

A synthesis of research conducted on the sardine run that was published in 2010 considered that "the sardine run most likely corresponds to a seasonal (early austral winter) reproductive migration of a genetically distinct subpopulation of sardine that moves along the coast from the eastern Agulhas Bank to the coast of KwaZulu-Natal (KZN) as far as Durban and sometimes beyond, in most years if not in every year." (Fréon et al. 2010).



About the contributor: Dr Carl van der Lingen

Dr Carl van der Lingen is a Scientist in the Chief Directorate: Resources Research, Fisheries Research and Development at the Department of Environment, Forestry and Fisheries in Cape Town. He has been involved in conducting research into the sardine run and in management of the KZN sardine beach-seine fishery. Dr Carl van der Lingen is a Fisheries Ecologist, who obtained his PhDs at the University of Cape Town.



Above: Map of the South African East coast indicating places relevant to the sardine run and mentioned in the text. The graph shows the time-series of annual sardine catches made by the KZN beach-seine fishery, 1951–2019. Note that accurate records are not available from 1951 to 1969 (except for 1965) but catches ranged between 0 and 200 tonnes; gaps in the time-series are identified with red asterisks and zero landings are indicated; and some catch data for 2019 (yellow histogram) is outstanding hence that value is preliminary and will increase slightly.

Above: Large sharks feeding on sardine were caught by local anglers. (Photo by Mike Kalamadacos).

Alternatively, the run could be “relic behaviour” of that typical of sardine during the relatively long glacial periods of 100 000 years or more during which times thermally-suitable habitat for sardine extended substantially further north (well into Mozambique) along the east coast. More recent research has further developed the hypothesis of three subpopulations of sardine off South Africa (western, southern and eastern; the latter engaging in the sardine run) that differ in a variety of phenotypic (body and otolith (ear stone) shape, numbers of gill rakers and vertebrae), genotypic (nuclear DNA), and other (life history strategies, early growth rates, and parasite and heavy metals loads) characteristics. Intriguingly (or tragically), massive marine pollution indicates that these populations and their movement behaviour, may also soon be identified by ingested plastics in their gut and body tissue.

Management of South Africa’s purse-seine fishery for sardine that targets western and southern subpopulations now uses a two-stock assessment model for making total allowable catch (TAC) recommendations. Management also includes both implicit and explicit spatial rules to limit exploitation on the more productive western stock. The South African sardine population is presently in a depleted state following almost a decade of sustained, low recruitment, with low TACs being recommended. Hence the good catches that have been taken during the 2020 sardine run to date are encouraging. However, June has typically been the month in which highest catches (around 40% of

annual total, on average) are achieved during the run, and catches are not a good indicator of the actual numbers or biomass of sardine that participate in the run, so inferences about the status of the eastern subpopulation made from catches should be made cautiously.

Catches by the beach-seine fishery during the sardine run have not exceeded 700 tonnes per annum and are very small in comparison to those made by the purse-seine fishery. Nonetheless, the KZN beach-seine fishery for sardine needs to be sustainably managed not only because of the ecological and economical (the latter primarily via eco-tourism although not in 2020) importance of the run itself, but also to retain the genetic diversity of South African sardine population overall. Such which may act as a “bet-hedge” strategy against biological and environmental perturbations such as those driven by climate change, which are anticipated to be relatively marked off the east coast. In response

The Department released a KZN sardine beach-seine fishery Covid Protocol last week as a response to the present Covid-19 pandemic. That protocol requires right holders in this fishery to conduct risk assessments, take prevention measures, provide personal protective equipment to crew, regularly clean fishing equipment, and ensure that crew adhere to social distancing protocols during fishing operations.

Further reading

- Fréon P, Coetzee JC, van der Lingen CD, Connell AD, O’Donoghue SH, Roberts MJ, Demarcq H, Attwood CG, Lamberth SJ, Hutchings L. 2010. A review and tests of hypotheses about causes of the KwaZulu-Natal sardine run. *African Journal of Marine Science* 32(2): 449–479. doi: 10.2989/1814232X.2010.519451
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- van der Lingen CD, Weston LF, Ssempe NN, Reed CC. 2015. Incorporating parasite data in population structure studies of South African sardine *Sardinops sagax*. *Parasitology* 142: 156-167. doi:10.1017/S0031182014000018

Dr Guy Preston retires after 25 years in Government

By Tshego Letshwiti

Images by Paul Sigutya, Tshego Letshwiti, Dr Christopher Jones



Above: Dr Guy Preston, Mrs Louise Asmal, wife of the late Professor Kader Asmal who was the founder of the Working for Water Programme, DG Nosipho Ngcaba and Dr Christo Marais.

As the Deputy Director - General of Environmental Programmes, Dr Guy Preston, retires after 25 years in the Public Sector, we chatted to him about his experience and time spent in the Department.

I started working in the Department of Water Affairs and Forestry in 1995, as a Special Advisor to Professor Kader Asmal, the then Minister of Water Affairs and Forestry. We set up various programmes, including the Working for Water programme to control invasive species, which I ran. That morphed into several labour-intensive environmental programmes within the Department and was the basis for what became the Expanded Public Works Programme.

We moved the programmes to the Department of Environmental Affairs in 2011, so as to consolidate the Working for Water programme and the emerging Biosecurity responsibility in the then DEA.

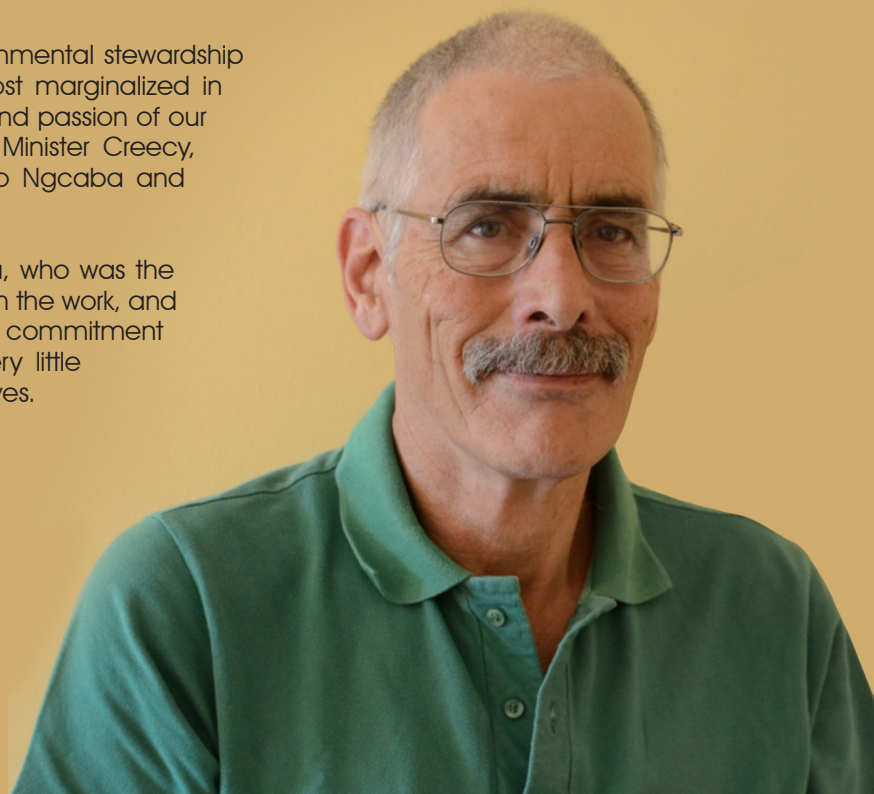
What drove your passion in the job you did for the department?

I think it was a combination of the need for environmental stewardship and the need for jobs and hope among the most marginalized in our country. But one is also swept up by the drive and passion of our various Ministers from Professor Asmal through to Minister Creecy, senior colleagues such as the former DG Nosipho Ngcaba and other leaders.

I would want to mention former President Mandela, who was the Patron of our first programmes and took an interest in the work, and of course President Ramaphosa. But there is great commitment for what we are doing within the Branch, with very little turnover, and real ownership of the various initiatives. That is also a wonderful stimulant.

What did you find most challenging about working for DEFF?

I guess the need for process by following norms, standards, systems and procedures, it is crucial, and we have seen what



happens when it is allowed to be corrupted. There is definitely progress in finding a balance where the responses to the developmental needs of the country can be optimised, without compromising the necessary controls. The switch to Modified Cash Standards has been difficult but we are now adapting to it, and hopefully will be in alignment going forward. We can and must do more and be facilitated to do more, with the resources at our disposal.

What are some of your greatest achievements of working in the Department?

Working with inspiring people.

What would your advice be to those who want to follow the same career path as you?

It's not about you. It's about what we collectively can do for others and for the environment. Focus on outcomes and the opportunities will come.

Having worked for the Department for so long and now you are approaching your retirement what will you miss the most about working for DEFF?

- The value-based approach to management that Nosipho Ngcaba put in place. It was a warm feeling to trust and admire so many of one's colleagues.
- Nosipho's 3D team meetings were fun.
- The camaraderie of our Branch managers was special.
- I also really liked talking to those in administrative and other support functions who had a sense of ownership and accomplishment in what has been done in the Branch (for all of the cogs in the wheel are vital).
- We were always a challenge for the support services (Finance, Legal, Human Resources, Communications, Facilities, Governance, Government Information Technology Office and Strategic Support), and I appreciated the professionalism in the support that developed with so many of our colleagues.
- I would want to mention the office of the DG, too, from whom there was such thoughtfulness and warmth.

What is the one thing you look forward to the most after retiring?

I have been given a lot of advice! I find it difficult to understand that I am technically a pensioner. I hope to find ways to continue to contribute in a few areas of work. Being with my family during lock-down has been special, despite the horror of the impact of COVID-19 (an invasive organism) in our country and the world. I look forward to spending more time with them, and our daily walks before sunset to clear invasive plants on the mountains above us in Hout Bay.

“The camaraderie of our Branch managers was special. I particularly worked closely with our three Chief Directors, Dr Christo Marais, Luvuyo Mliilo and Matilda Skosana, and of course the office of the DDG. They are all treasured.”



Above: The late Professor Kader Asmal and Dr Guy Preston



Above: Deputy Director - General of Environmental Programmes Dr Guy Preston and the late Minister of Environmental Affairs, Dr Edna Molewa.

Quick Facts:

Hometown: Port Elizabeth

Hobbies: Hiking, music, sport, clearing invasive plants

Favourite quote / motto: When I was about ten, I recall asking someone, “How can you judge people by factors over which they have no control?” It has stuck with me.

Currently Reading: Just finished reading “Endurance: Shackleton’s Incredible Voyage” by Alfred Lansing (1959), a beautifully written book about extraordinary courage. It seemed appropriate for the lock-down period.



Above: The Gough Island Emergency Hut is made from wood-plastic composite, with finishings using invasive wood, by the Value-Added Industries and Eco-Furniture Programmes.



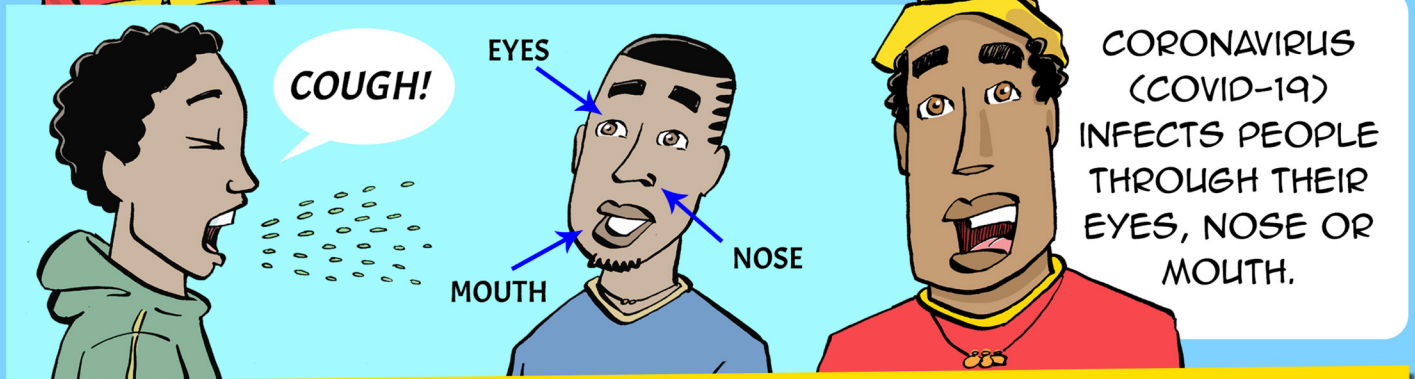
Above: The Knysna Light House is fire-proof, bullet-proof, superior strength, better acoustic and thermal properties, termite-resistant, made primarily (75%) from chipped invasive biomass by the Value-Added Industries programme.

HAY'KHONA CORONA!

YOUR ACTIONS CAN SAVE LIVES!



CORONA VIRUS (COVID-19) IS HERE.
THIS IS A NEW AND DANGEROUS VIRUS WHICH SPREADS EASILY AND HAS ALREADY KILLED MANY PEOPLE AROUND THE WORLD.



CORONAVIRUS (COVID-19) INFECTS PEOPLE THROUGH THEIR EYES, NOSE OR MOUTH.

HOW CAN YOU KEEP SAFE AND SLOW DOWN THE SPREAD?

Wash your hands regularly with soap and water for at least 20 seconds.



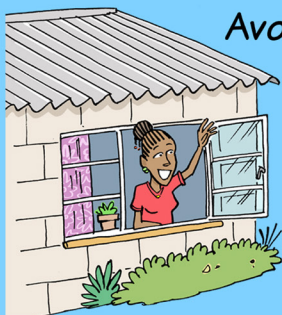
Avoid touching your eyes, nose, and mouth with unwashed hands.



Cover your cough or sneeze with a flexed elbow or a tissue, then throw the tissue in the bin.



Avoid close contact with people. Stay at home, and keep a physical distance from others.



REMEMBER, IF YOU TAKE CARE OF YOURSELF, YOU TAKE CARE OF OTHERS!



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ACTIVATE AFRICAN KNOWLEDGE
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PROTECT SOUTH AFRICA
TOGETHER WE CAN BEAT THE CORONAVIRUS

R1 million set aside for youth projects

By Zibuse Ndlovu



Above: Earlier this year, Minister Creecy had an initial engagement with the youth, and encouraged them to actively participate in climate mitigation and adaptation initiatives.

The Department of Environment, Forestry and Fisheries (DEFF) has earmarked R1million to fund youth-led projects tackling the issues of climate change, waste management and biodiversity loss. This was revealed during a virtual Youth Environment and Sustainability Dialogue hosted by Minister Barbara Creecy on 16 June 2020, under the theme: Youth Power: Growing South Africa together during the period of Covid-19.

Minister Creecy said the decision was a response to the call for more support for young innovators and entrepreneurs. "From 1 July applications will be open for 2 months, with adjudication of projects taking place in September and October. In November grants of R100 000 will be awarded to 10 successful projects," said Minister Creecy.

More than 100 youth from across South Africa took part in the virtual dialogue during which they expressed concern about the dire economic impact of Covid-19 and its effect on achieving the goals set out in the 2015 Paris Agreement on Climate Change.

Among the suggestions presented to the Minister, by youth representing 15 organisations, was a green recovery mechanism that is gender-and-youth-responsive. The youth asked for the country's green recovery strategy to include more rapid introduction of renewable energy,

greener public transportation and the upscaling of the circular economy to better manage waste. In a joint statement, the youth stressed that climate change be addressed with greater urgency by all levels and sectors of government. A concern was also expressed for vulnerable community members including waste recyclers who play a significant role in waste diversion from landfills but work under dangerous and insanitary conditions.

Chief Director of International Climate Change Relations and Negotiations, Mr Maesela Kekana said the Department will have more focused consultation with the youth on the updating of the National Defined Contributions (NDC) "The NDC needs to be generally responsive to the issues raised by the youth, we have already outlined the consultation process, our NDC is following five step process, the first being the research part, followed by the intergovernmental part where we do internal consultations as government, and the third one being consultation with stakeholders, and we will include the youth on these consultation," said Mr Kekana.

The applications for funding will be open for two months from 1 July until the end of August 2020. Adjudication by an independent panel is expected to take place in September and October. Announcement of the selected projects will be made in November.



About the contributor: Zibuse Ndlovu

Zibuse Ndlovu is the Assistant Director in the Chief Directorate: Communications at the Department of Environment, Forestry and Fisheries.

JUNE IS YOUTH MONTH



YOUTH POWER:
GROWING SOUTH AFRICA
TOGETHER IN THE PERIOD
OF COVID-19



#YouthDay2020 #YouthMonth2020 #YouthPower



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30TH ANNIVERSARY
SINCE THE RELEASE OF
NELSON MANDELA



STAY
SAFE

PROTECT SOUTH AFRICA
TOGETHER WE CAN BEAT THE CORONAVIRUS

Caring for our environment

Start a home garden

YOU CAN **PLANT YOUR OWN FRUIT AND VEGGIES** IN A HOME GARDEN. YOU WILL BE HELPING THE ENVIRONMENT AND SAVING MONEY AT THE SAME TIME!



Make your own compost

PUT LEFTOVER FOOD IN A **COMPOST HEAP**. YOU CAN USE COMPOST TO GROW NEW PLANTS. MAKING COMPOST ALSO REDUCES SPACE USED FOR LANDFILLS AND CREATES HEALTHY SOIL.



Plant indigenous

PLANT **INDIGENOUS SPECIES** OF PLANTS. THEY USE LESS WATER AND PROVIDE FOOD AND HABITAT FOR ANIMALS.



Reuse

USE A **GLASS DRINKING BOTTLE** THAT CAN BE WASHED OUT AND USED AGAIN. IF YOU USE ITEMS THAT CAN BE REUSED, THIS RESULTS IN LESS WASTE.



Reduce . Reuse . Recycle . Recover



Are you making a difference?



Section 24 of the South African Constitution states:
"Everyone has the right to an environment that is not harmful to their health or well-being."

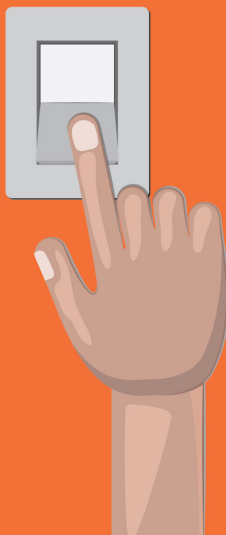
Become a Waste Picker

START **WASTE PICKING** TO MAKE MONEY. WASTE PICKERS COLLECT RECYCLABLE MATERIALS TO RESELL TO BUYBACK CENTRES.



Reduce power use

WHEN YOU EXIT A ROOM, **ALWAYS TURN OFF THE LIGHTS**. USING ELECTRICITY CREATES POLLUTION. YOU WILL CREATE FAR LESS POLLUTION IF YOU SAVE ELECTRICITY.



Don't use plastic

PLASTIC BAGS HARM ANIMALS AND THE ENVIRONMENT AND TAKE YEARS TO BREAK DOWN. USE YOUR OWN **CANVAS BAG** INSTEAD OF PLASTIC BAGS.



Save water



SAVING WATER IS EXTREMELY IMPORTANT. ALL LIVING SPECIES NEED WATER TO SURVIVE. ALWAYS **TURN OFF YOUR TAP** WHEN YOU'RE FINISHED AND FIX ALL YOUR PLUMBING **LEAKS**.

Clean up! Pick it up!



NOW THAT YOU KNOW THE 'FOUR R'S' OF RECYCLING, YOU'RE ONE STEP CLOSER TO BECOMING A **RECYCLING SUPERHERO!** SORT EACH ITEM INTO THE CORRECT BIN - THE FEWER ITEMS IN THE LANDFILL BIN, THE BETTER!



- | | | |
|----------------|---------------------|--------------------|
| Eggshells | Disposable nappies | Meats |
| Grocery bags | Plastic | Cardboard |
| Aluminium Can | Vegetable Scraps | Household cleaners |
| Glass bottle | Newspaper | Paper towels |
| Bread | Paint thinners | Pie tins |
| Shoes | Pasta | Cheese |
| Clothing items | Frozen dinner trays | Paper |
| Leftover rice | Batteries | Deodorant cans |
| Magazines | | |

DID YOU KNOW?
YOU CAN HELP CLEAN UP YOUR COMMUNITY TO MAKE MONEY BY BECOMING A WASTE PICKER!

FISTOZ NOTYAWA IS A WASTE PICKER. HE LIVES ON A LANDFILL IN MAKHANDA IN THE EASTERN CAPE. FISTOZ COLLECTS RECYCLABLE MATERIAL AND RESELLS IT TO BUYBACK CENTRES AND SCRAP YARDS. HE WORKS EIGHT TO TEN HOURS A DAY, MAKING BETWEEN R60 AND R140 DAILY!



ANSWERS:
REUSE: Grocery Bags, Shoe, Clothing . RECYCLE: Aluminium Cans, Plastic, Glass bottles, Household cleaners, Househoid cleaners, Batteries, Deodorant cans, Pie tins, Frozen dinner trays, Newspaper, Magazines, Paper, Cardboard . COMPOST: Vegetable scraps, Egg shells, Paper towels, Leftover rice, Pasta, Bread . LANDFILL: Cheese, Meats, Disposable nappies



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